

Figure 1 Performance-intensity functions for normal ear, conductive loss, cochlear site of lesion, and retrocochlear site of lesion.

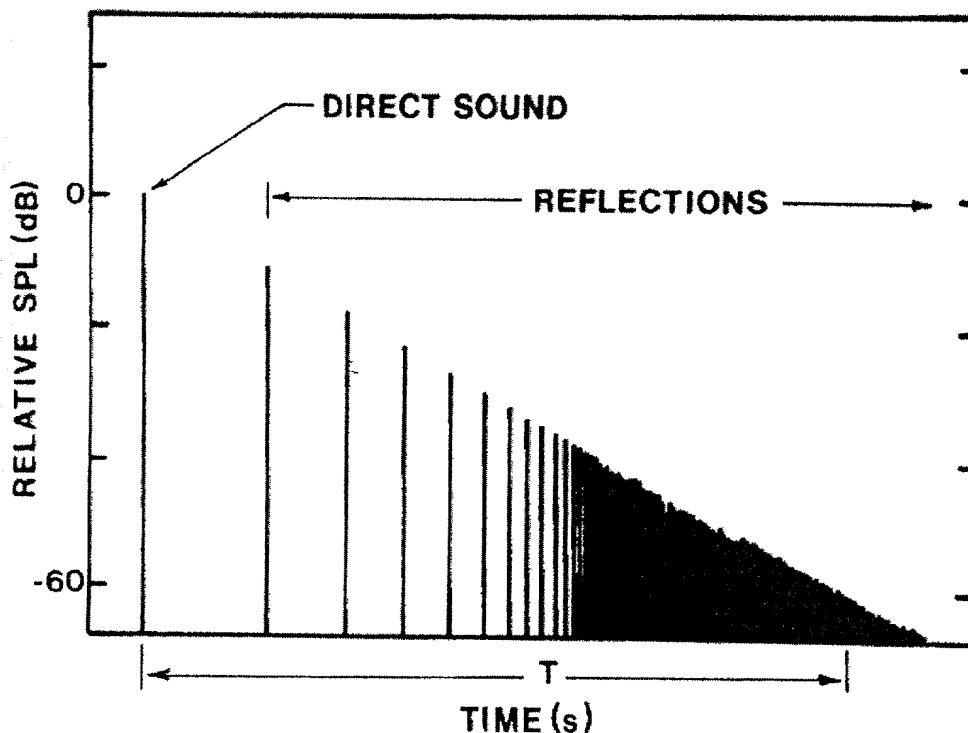


Figure 2 An example of a time sequence of reflections following a brief direct sound. Reverberation time (T) is shown for the 60-dB SPL decrease.

| FREQUENCY RANGE (Hz) | PER CENT SPEECH POWER | PER CENT INTELLIGIBILITY |
|----------------------|-----------------------|--------------------------|
| 62 - 125 | 5 | 1 |
| 125 - 250 | 13 | 1 |
| 250 - 500 | 42 | 3 |
| 500 - 1000 | 35 | 35 |
| 1000 - 2000 | 3 | 35 |
| 2000 - 4000 | 1 | 13 |
| 4000 - 8000 | 1 | 12 |
| | 60 | 5 |
| | 95 | |
| | .5 | |
| | | 60 |
| | | 95 |

Figure 3
Comparison Chart

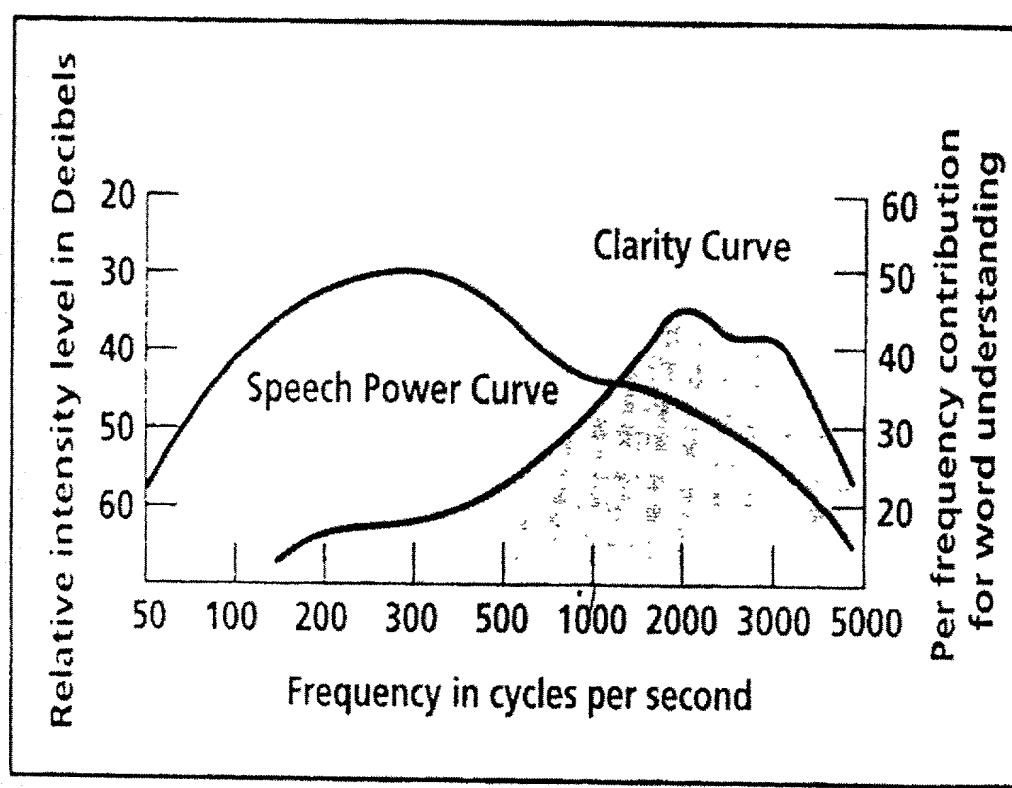


Figure 4
The Speech Power Curve
and the Speech Clarity Curve

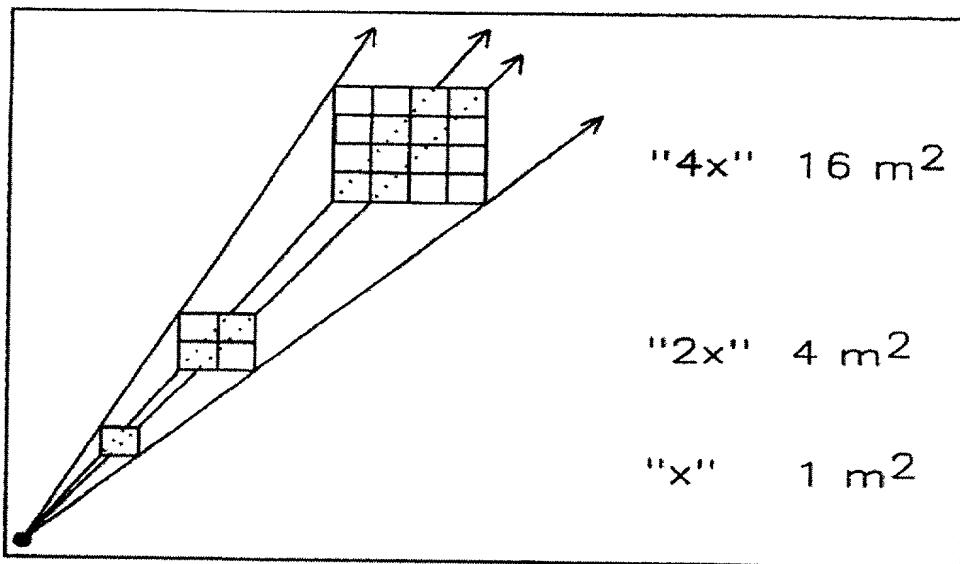


Figure 5 A three dimensional representation of the **inverse square law**. As the distance from the point source of sound increases from X to $2X$ to $4X$, a finite amount of power is dissipated over a larger and larger area (from 1 m^2 at X to 4 m^2 at $2X$ to 16 m^2 at $4X$). Hence, the intensity (energy/sec/m²) decreases inversely with the square of the distance from the source.

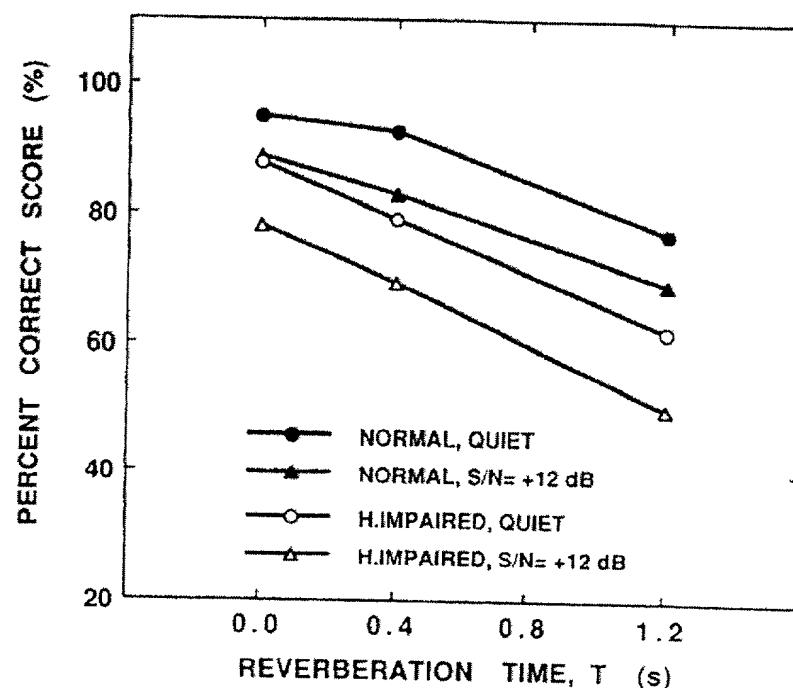


Figure 6 Percent words correct scores for normal-hearing and moderately hearing-impaired school-age children (adapted from Finitzo-Hieber T, Tillman TW. Room acoustics effects on monosyllabic word discrimination ability for normal and hearing-impaired children. J Speech Hear Res 1978;21:440-458).



Figure 6a

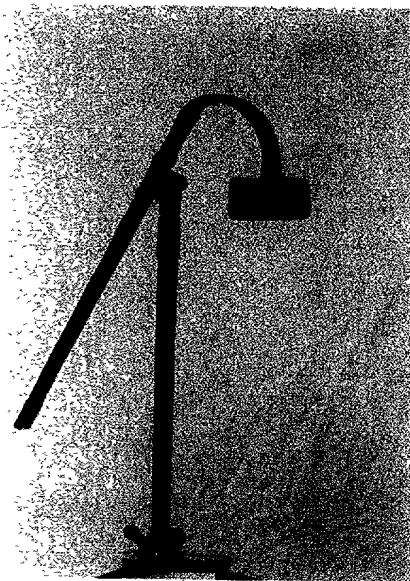


Figure 6b

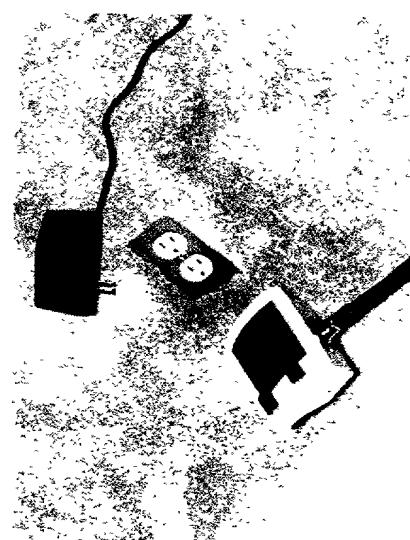


Figure 7

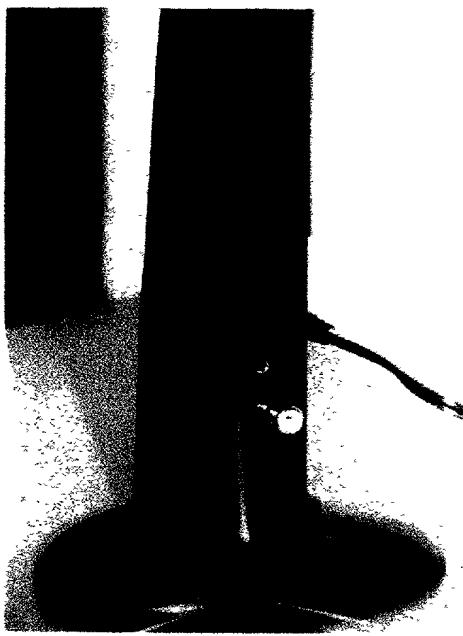


Figure 8



Figure 9



Figure 10